Human Body in Space: NASA's Research on Astronaut Health

Space Medicine · Answer Key · 10 Questions

1. What acronym summarizes the five human spaceflight hazards related to stressors on the body?

A) RIDGE
B) SPACE
C) HAZARD
D) HUMAN

2. Which type of radiation in the space environment has a larger impact on health outcomes compared to radiation experienced on Earth?

A) Solar energetic particles
B) Galactic cosmic rays
C) Particles trapped in Earth's magnetic field
D) Ultraviolet radiation

3. What is one method NASA uses to counteract possible problems related to isolation and confinement during space missions?

A) Providing unlimited internet access
B) Using actigraphy to improve sleep and alertness
C) Eliminating all communication with Earth
D) Increasing workload to prevent boredom

4. What is the average distance from Earth to Mars?

A) 240 miles
B) 140 million miles
C) 1,000 miles
D) 1 million miles

5. How much bone mineral density can astronauts lose per month during spaceflight due to the lack of Earth's gravity?

A) 0.1% to 0.5%
B) 1% to 1.5%
C) 5% to 10%
D) 0.01% to 0.05%

6. What is one way NASA monitors the air quality of the space station?

A) Releasing exotic gases
B) Analyzing blood samples
C) Swabbing surfaces
D) Monitoring for gases like formaldehyde and carbon monoxide

7. Which of the following is NOT a gravity field astronauts will encounter on a Mars mission?

A) Weightlessness
B) Earth's gravity
C) One-third of Earth's gravity
D) Lunar gravity

8. What is the purpose of quarantining astronauts before their missions?

A) To boost their immunity
B) To study their behavior
C) To prevent catching illnesses before launch
D) To test their physical fitness

9. What is one potential health risk associated with increased radiation exposure in space?

A) Decreased risk of cancer
B) Improved vision
C) Increased risk of degenerative diseases
D) Enhanced muscle mass

10. What is one potential solution that can help prevent crew boredom during a multi-year round trip to Mars?

A) Eliminating communication with Earth
B) Engaging in relevant activities like learning a language
C) Restricting privacy
D) Increasing workload